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(19) **United States**(12) **Patent Application Publication**  
**Sweeney et al.**(10) **Pub. No.: US 2021/0374655 A1**(43) **Pub. Date: Dec. 2, 2021**(54) **NETWORK SYSTEM INCLUDING DRONES****Publication Classification**(71) Applicant: **Joby Elevate, Inc.**, Santa Cruz, CA (US)(51) **Int. Cl.****G06Q 10/08** (2006.01)**B64C 39/02** (2006.01)(72) Inventors: **Matthew Sweeney**, San Francisco, CA (US); **Nikhil Goel**, San Francisco, CA (US); **Mark Moore**, San Francisco, CA (US); **Jeffrey A. Holden**, San Francisco, CA (US)(52) **U.S. Cl.**CPC ..... **G06Q 10/083** (2013.01); **B64C 39/024** (2013.01); **B64C 2201/208** (2013.01); **B64C 2201/128** (2013.01); **B64C 2201/024** (2013.01)(21) Appl. No.: **17/354,460**(22) Filed: **Jun. 22, 2021****Related U.S. Application Data**

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(57) **ABSTRACT**

A network system provides delivery of items using unmanned aerial vehicles (UAV) or drones. The network system uses an infrastructure of nodes that include landing pads to dock drones, as well as interfaces to provide and receive items from docked drones. Nodes may be stationary (e.g., fixed at a building rooftop or public transit station) or mobile (e.g., mounted to a vehicle). The network system may determine a route for delivery of an item, where a drone transports the item for at least a portion of the route. For example, the route may include multiple waypoints associated with nodes between which drones travel. For other portions of the route, the network system may request a provider to transport the item using a ground-based vehicle.

